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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,373	09/24/2003	Donald J. Christensen	H0004550	1871

128 7590 06/10/2004

HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

HOLZEN, STEPHEN A

ART UNIT	PAPER NUMBER
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3644

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,373

Applicant(s)

CHRISTENSEN, DONALD J.

Examiner

Stephen A. Holzen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 12 and 16-23 is/are rejected.
- 7) ☐ Claim(s) 3-5 and 13-15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/24/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been fully considered but they are not persuasive. The applicant has stated that Porte does not disclose a lock actuator assembly coupled to the main reservoirs adaptive to receive a lock control signal. Col. 4, lines 65 - col. 5 lines 15 of Porte teach a supply valve (63) and a hydraulic pump which control the deployment of the actuator (35). The valves and pump are electrically controllable via the switch (42). Manually operating the switch can change the operating state of the valves and pump whereby the valves prevent (lock) oil from returning from the actuator to the reservoir.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2,6-12,16-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Porte (6,227,485).

Re - claims 1,2,7-12, 17-20: Porte discloses a system for moving an aircraft thrust reverse comprising:

- a power drive unit operable to supply a drive force (figure 11)

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- a thrust reverser actuator assembly coupled to receive the drive force and operable in response thereto to selectively move the thrust reverser between a stowed position and a deployed position (see Figure 2)
- a main reservoir containing a hydraulic fluid therein (#62)
- a lock^{35,39,48} actuator assembly_A (see Figure 13) coupled to the main reservoir and adapted to receive a lock control signal, the lock actuator assembly responsive to the lock control signal to compress and thereby pressurized, the hydraulic fluid pressurization to move to one of a locked or an unlocked position to thereby prevent or allow respectively thrust reverser movement.
- An electric motor adapted to receive the lock control signal and operable in response thereto to rotate in at least a first direction (60)
- An actuator (#35) coupled to the motor and the main reservoir, the actuator configured to translate in a least a first direction in response to the motor rotation in the first direction to thereby compress the hydraulic fluid.
- Wherein at least one of the lock assemblies is mounted on the thrust reverser actuator assembly and is configured to selectively prevent or allow movement thereof. (#35)
- Wherein at least one of the lock assemblies is selectively coupled to the thrust reverser to thereby selectively prevent or allow movement thereof. (#35)

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- Wherein at least one of the lock assemblies is coupled to the power drive unit and is configured in response to the hydraulic fluid pressurization to move to one of a set or a release position to thereby prevent or allow thrust reverser actuator assembly movement (#35)
- Wherein one or more of the lock assemblies are biased toward the locked position (see Col. 5, lines 8-10)

4. Claims 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Porte. Porte discloses energizing the actuator assembly to translate a portion thereof in a first direction (see Col. 5, lines 1-15), pressurizing a hydraulic fluid (see Col. 5, lines 1-15), moving the locks to one of a locked or an unlocked position in response to they hydraulic fluid pressurization (see Col. 5, lines 8-10), deenergizing/energizing the actuator assembly to thereby allow the pressurized hydraulic fluid to translate at least of portion thereof in a second direction that is opposite the first direction (Col. 5, lines 5-7), moving the locks to one of an unlocked or locked position in response the hydraulic fluid pressurization (opening valves #64).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Porte. Porte discloses

Wherein the lock actuator assembly comprising:

- An electric motor (60) adapted to receive the lock control signal and operable, in response thereto, to selectively rotate in at least a first direction; (inherent that a motor rotates in at least one direction)
- An actuator couple to the motor, the actuator configured to translate linearly in at least a first direction in response to the motor rotation in the first direction; and (35)
- A plunger coupled to the actuator and having an outer peripheral surface in substantially fluid sealed contact with the main reservoir inner peripheral surface whereby translation of the actuator in the first direction results in the compression of the hydraulic fluid.
(inherent in the use of a hydraulic actuator)

Porte does not disclose a main reservoir having a substantially hollow cylinder having an inner peripheral surface. However Porte does disclose that it would have been known to use a pressurized reservoir. Crudden et al discloses that it is well known in the art to use hollow cylinders with an inner peripheral surface as reservoirs for hydraulic fluid. (see Figure 3, #18) It would have been obvious to use the cylindrical reservoirs of Crudden et al in the design of Porte for increased control of the actuators.

Allowable Subject Matter

7. Claims 3-5 and 13-15 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose the use of bellows in combination with thrust reverser assemblies and further does not disclose the use of a two way rotatable engine and plunger.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 703-308-2484. The examiner can normally be reached on M-F 7:30 - 5:00.

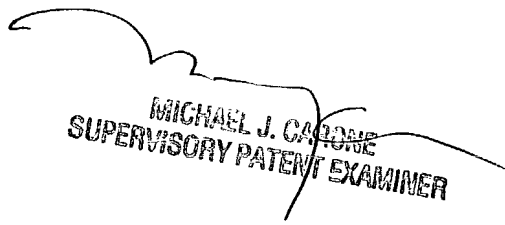
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles T. Jordan can be reached on 703-306-4159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


MICHAEL J. JORDAN
SUPERVISORY PATENT EXAMINER

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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MICHAEL J. CAPONE
SUPERVISORY PATENT EXAMINER

MICHAEL J. CAPONE
SUPERVISORY PATENT EXAMINER